

New State *Stormwater* Rules:

WHAT MUNICIPALITIES NEED TO KNOW

Public Education & Outreach

To meet the new state stormwater discharge requirements, municipalities must develop an education and outreach program that:

- informs residents of the impacts of stormwater runoff on local streams and lakes, and
- provides recommendations on how to reduce stormwater pollution.

The state rules allow municipalities a great deal of flexibility in choosing methods to meet the education and outreach requirements. This publication offers practical advice on developing an effective education program.



Many communities with storm sewer systems are now required to obtain state permits before discharging stormwater to streams and lakes. These permits are required by federal and state laws, and are administered by the Wisconsin Department of Natural Resources. The permit program has been phased in over time. Phase I mainly affected large communities such as Milwaukee and Madison. Phase II is now affecting many more communities.

Federal rules that require stormwater permits are referred to as Phase I or Phase II rules. The state rule is found in Chapter NR 216 of the WI Administrative Code. This fact sheet refers specifically to Wisconsin's NR 216 rule, but be aware that the "Phase II" term is often used to refer to required permit programs.

Communities must meet the requirements of six "minimum control measures." These are:

- *Public education and outreach*
- *Public participation and involvement*
- *Illicit discharge detection and elimination*
- *Construction site runoff control*
- *Post-construction runoff control*
- *Pollution prevention/Good housekeeping*



Sandy Stoneman

Why do the regulations require an education and outreach program?

State and federal officials agree that public education is an essential part of any plan to reduce stormwater pollution, because the daily activities of millions of people contribute significantly to non-point source pollution.

As citizens learn about the impacts of their actions on local water resources, they will become more likely to change their behaviors. For example, dog owners may be more inclined to pick up their pet's waste if they know that it can contribute bacteria to stormwater flow and may contribute to beach closing problems. An education program can also help communities learn about the kinds of barriers that prevent individuals from adopting new practices.

Why can't I rely solely on stormwater ponds and other "structural" solutions? Does education work?

You can improve water quality substantially with structural best management practices (BMPs), but you would only solve part of the problem. To reduce the amount of stormwater pollution, you must increase public awareness of the problem and teach people how to reduce polluted runoff from their yards, community areas and other private lands.

Education is an effective means of improving stormwater quality because it can bring about behavior change. Think about recycling – most of us now consider recycling a normal activity, but when recycling first appeared many people did not know about recycling or how to do it. The fact that it is now such an everyday part of our lives is due in part to a successful educational campaign.

A primary goal of your education and outreach program should be to help people become aware of stormwater issues and change behaviors accordingly. An informed and knowledgeable community will offer more support and greater compliance.

The Wisconsin Department of Natural Resources' role in reducing polluted stormwater and meeting the requirements of the Federal Clean Water Act (CWA):

The DNR implements Phase II through Chapter NR 216 of the WI Administrative Code. Chapter 216 existed prior to the implementation of Phase II and was revised in 2004 to comply with Phase II. NR 216 requires small Municipal Separate Storm Sewer Systems (MS4s) to prepare the following:

- 1) A public education and outreach program to increase awareness of stormwater impacts on waters of the state (see sidebar, page 4), and
- 2) A program that:
 - a) provides technical information on best management practices,
 - b) targets specific business audiences such as lawn care companies for stormwater pollution prevention, and
 - c) promotes environmentally sensitive land development designs.

By meeting the Wisconsin permit requirements, the operator will comply with the federal rules.



Suzanne Wade

How do I know what will work to change behaviors in my community?

An effective educational program – one that brings about behavioral change – is based on an understanding of target audiences and strategic approaches to reaching them. The following steps will help you determine the most effective ways to reach and educate your community:

- (1) prepare an outreach plan,
- (2) gather information about the target audience, and
- (3) consider community-based social marketing concepts.

Prepare a plan

Planning sets the foundation of your program. By developing a plan for your education and outreach program you will:

- Identify target audiences,
- Develop messages for the audiences,
- Determine how best to reach the audiences with your messages, and
- Prioritize those audiences and activities.

You will also:

- Use funds and staff time more efficiently, and
- Establish a framework for documenting compliance and demonstrating progress.

Include community members in the planning process to ensure that your plan meets local needs and that your activities will have the support of local residents and decision-makers. To see an example plan, visit Dane County's web site: www.danewaters.com/pdf/stormwater/jointstormwaterpermit.pdf

Gather information about audience interests and preferences

There are many ways to collect information about property owner interests and preferences. These include surveys, focus groups, discussions, and review of reports and databases.

It will be helpful to assemble a group of people from your community that can help you apply the information you will gather. Such a group, referred to as a "community outreach committee," might consist of community residents, your local UW-Extension Community Resource Development Educator, local business owners in target audience groups, or other local leaders. Remember to include members of the target audience in the outreach committee.

With the help of your community outreach committee, identify property owners and other audiences in the community that should modify home and neighborhood practices that affect stormwater runoff. Collect information to figure out



Jeffrey J. Strobel



Suzanne Wade

Your public education and outreach program must:

- ✓ Promote detection and elimination of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers;
- ✓ Inform and educate the public to facilitate the proper management of materials and encourage the public to change their behavior that may cause storm water pollution from sources including automobiles, pets, household hazardous waste and household practices;
- ✓ Promote beneficial on-site reuse of leaves and grass clippings and proper use of lawn and garden fertilizers and pesticides;
- ✓ Promote the management of streambanks and shorelines by riparian landowners to minimize erosion, and restore and enhance the ecological values of the waterway; and
- ✓ Promote infiltration of residential stormwater runoff from rooftop downspouts, driveways and sidewalks.

Source: State Administrative Rule NR 216.07(1)a

which type of outreach will be effective. Find out what people know about stormwater and where they get their information. Questions asked as part of interviews, discussions, surveys or focus groups can also help identify the kinds of activities that people are willing to undertake and which ones they are not. Share results with your committee. They can help decide how to apply the information in an outreach plan.

Gathering information about property owners and users also provides a means for communities to document effectiveness, which will help demonstrate permit compliance. If information-gathering is completed early in the program, it can be used again in the future to help track changes in attitudes, awareness and behaviors. Methods for collecting information about property owner preferences include surveys, focus groups, discussions, and review of reports and databases.

Getting in Step, a Guide to Effective Outreach Campaigns is an excellent source of detailed instructions for how to proceed:

www.epa.gov/owow/watershed/outreach/documents/getnstep.pdf

Establishing measurable goals: As you begin to implement your plan, it will be helpful to establish measurable goals for the activities you will be conducting. In fact, the WDNR permit requires that measurable goals be established for the activities conducted as part of your education and outreach program.

Guidance prepared by the U.S. Environmental Protection Agency (USEPA) defines measurable goals as objective markers or milestones that track the progress and effectiveness of BMPs. Each measurable goal should contain the following components:

- The activity to be completed.
- Person(s) who will complete the activity.
- A schedule or completion date.
- A quantifiable benchmark to measure progress toward achieving the activity or BMP.



Measurable parameters for educational activities can include:

- Observations, such as the number of municipal employees observed implementing a new practice.
- Number of new site plans that incorporate low-impact development practices.
- Visual surveys of neighborhood or public landscapes (before and after).
- Trends in purchases of landscaping materials at a local home improvement store.
- Amount of specified contaminants (such as leaves or sediment) moving into sewers during peak storm events.

Apply community-based social marketing

Numerous studies show that simply providing information rarely results in behavior change. A concept known as “community-based social marketing” provides a framework to understanding how to promote behaviors that are environmentally sustainable. Community-based social marketing is based on research in the social sciences that shows that behavioral change is most effectively achieved through initiatives that focus on removing barriers to, and/or enhancing the benefits of an activity for an individual.

This involves four steps:

- 1) Identify the barriers and benefits of an activity by reviewing the literature, facilitating focus group discussions, and conducting surveys.
- 2) Develop a strategy that uses tools that are effective in changing behaviors. These tools include the following:
 - ▶ Asking for a commitment,
 - ▶ Placing a specific prompt near the behavior (an example would be messages stenciled near storm drains asking people to not dump waste in the drains),
 - ▶ Communicating the norm – people are more likely to do something if they think others are doing it, and
 - ▶ Removing barriers – making it easier for people to do something improves the chances that they will actually change their behavior.
- 3) Test the strategy with a small group.
- 4) Evaluate the strategy once it has been implemented.

You can get additional information about community-based education as well as a comprehensive selection of water education resources designed for specific audiences from the UW-Extension Environmental Resources Center: www.uwex.edu/erc

Another helpful resource is the Best Education Practices for Water Outreach Professionals web site. Best Education Practices are based on research and experiences of professional educators. Visit: wateroutreach.uwex.edu



What are the basic elements of a typical education and outreach program?

The elements of education and outreach programs that your community chooses to implement should be described in your plan. The elements will vary widely depending on available resources and the characteristics of the audiences in a particular community.

Many education and outreach programs use very broad messages for a public audience through a media campaign that employs television and radio public service announcements, posters and billboards. (One example of a general message might be “stormwater carries untreated soil and contaminants into a lake or stream.”) This general message is often supplemented by targeted messages conveyed through workshops, videos, fact sheets and brochures for specific audiences (for example, training automotive repair workers to dispose of used motor oil properly). The program will change depending on the attitudes, awareness levels and training needs of the people that live and work in your community. The following list identifies some common elements of education and outreach programs that other communities have used:

Techniques for general audiences:

- A telephone hotline for citizens to report illicit discharges.
- Public service or paid announcement for television and radio that provides simple, specific behavior tips.
- A logo that draws attention to all sites where stormwater protection tips are available.
- A list of programs and speakers for workshops and school programs.
- Posters and billboards around town that provide simple, specific behavior tips.

Techniques appropriate for targeted audiences:

- Surveys to assess knowledge of stormwater issues and preferences for learning how to make changes.
- Fact sheets for targeted audiences such as lawn care service providers.
- Technical reports for engineers that are designing structural BMPs and developing stormwater management plans.
- Service-learning activities for youth.
- Communication initiatives based on community-based social marketing principles.
- Workshops and tours where participants practice new skills or view best practice applications.



Communicating with audiences who want to make changes:

- Web sites – provide web site resources that make it easy for target audiences to find information specifically for them.
- Information distribution – provide brochures or fact sheets that include details for how to do a specific activity.
- Press releases – focus on how to do a specific activity or an event of interest to a particular audience.

Many communities have made their education and outreach materials available on the web, and will share them with other communities that are interested in adapting them to their own areas.

How do I know that my educational program is working?

Evaluation helps you to adjust your program as you go, or revise a program before implementing the next one. Mailed surveys, telephone surveys and focus groups are expensive and require a lot of planning, but can provide a broad picture of your program's effectiveness. Less formal follow-up techniques (observations at a meeting, collecting anecdotal stories, etc.) can also provide feedback.

Before choosing an evaluation method, you should ask several questions:

- What is the purpose of the evaluation?
- What achievements or insights are expected?
- Who will use the information?
- How will they use the information?
- What specifically do you and others want to know?
- When are the evaluation results needed?
- What is your timeline?
- What are your own abilities and skills?
- Are there others who can help?
- What resources are available, including time, money and people?

Answering these questions will help ensure that your evaluation project will provide useful information while remaining within your time and budget constraints.

UW-Extension provides excellent resources to help guide your investigation process and other evaluation activities. See *Collecting Evaluation Data: Surveys* – UW-Extension publication G3658-10 www.uwex.edu/ces/pdande/evaluation/evaldocs.html



Pam Packer

Regional Stormwater initiatives

A regional effort may already be underway in your area. For example, in northeast Wisconsin, the Northeast Wisconsin Stormwater Consortium (www.newsc.org) includes communities in Brown, Calumet, Fond du Lac, Outagamie, and Winnebago counties. The member communities pay dues but receive services and resources that will help them meet the regulatory requirements and improve water quality.

Can I partner with other communities to develop a stormwater education and outreach program?

Communities can benefit greatly by entering into partnerships with other communities and governmental entities to create a regional plan. The advantages of working regionally on stormwater education are:

- Cost savings – share costs of printing publications and developing Public Service Announcements (PSAs).
- Enhanced ability to use mass media.
- Consistent educational messages.
- Reduce duplication of topics and tasks by hosting regional workshops.
- Efficient communication with regulators to ensure compliance with rules.

I still have questions...where do I go for help?

Your UW-Extension Basin Educator for Natural Resources, or county UW-Extension Community Resource Development Educator can help you think about the types of educational activities that might be effective in your community. They can also help you develop your education and outreach plan, determine your evaluation needs, and choose the appropriate evaluation method. Wisconsin Basin Educator contact information is on the web at:

basineducation.uwex.edu/basins/staff

In addition, UWEX has produced many publications, such as the *Yard Care and the Environment* series, that you can distribute to community members as part of your education and outreach program. Many of these publications are available on the web at:

clean-water.uwex.edu/pubs

The Wisconsin Department of Natural Resources has compiled lists of DNR educational programs and publications as well as useful links at its “Runoff Management Outreach Activities” web page:

www.dnr.state.wi.us/org/water/wm/nps/outreach.htm

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